



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Seneca Valley High School
Date of Test Report	05/12/2022
Round of Testing	<p>Initial</p> <p><u>Follow-up</u></p> <p>Post Remediation</p> <p>2 Year Testing</p> <p>5 Year Testing</p> <p>HVAC Upgrade</p> <p>Window Replacement</p> <p>New Addition</p> <p>New Facility</p>
# Rooms Tested	15
# Rooms ≥ 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	2.4 pCi/L

Project Status

Current Project Status at this time: Testing completed; no further action needed



May 12, 2022

Mr. Brian Croyle, PG, CHMM
Environmental Specialist
Montgomery County Public Schools
Gaithersburg, MD 20879

Re: **Radon Testing Services**
KCI Job # 122108316

Location: Seneca Valley High School
19401 Crystal Rock Dr.
Germantown, MD 20874

Dear Mr. Croyle:

KCI Technologies, Inc. (KCI) is pleased to submit the following report to Montgomery County Public Schools (MCPS) pursuant to completing a “short-term” 3 day radon test for the Seneca Valley High School, located at 19401 Crystal Rock Dr. Germantown, MD 20874 (subject site).

Scope of Services:

KCI conducted radon testing at the subject site to evaluate indoor radon levels relative to the USEPA's recommended action level of 4.0 picocuries per Liter (pCi/L) - the level at which EPA recommends that schools take action to reduce the level. KCI conducted the radon testing in accordance with American Association of Radon Scientists and Technologists (AARST) *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*. A National Radon Proficiency Program (NRPP) Radon Measurement Specialist (certification #111004 RT) supervised the testing. Additional information on radon management and the health effects of radon exposure is available from <https://www.montgomeryschoolsmd.org> or www.epa.gov/radon.

KCI visited the site on March 22, 2022 and deployed seventeen (17) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

KCI sampled the following locations during this follow-up test:

1. Rooms with missing test kits from the Radon 2022 testing period (i.e. test kit was deployed but not recovered),
2. Rooms with invalidated test kits from the Radon 2022 testing period (e.g. an open window in the room or disturbed test kit),
3. Rooms which were locked/inaccessible during the Radon 2022 testing period,
4. Rooms with elevated radon results (i.e. ≥ 3.5 pCi/L),
5. Rooms previously tested for radon but not tested in Radon 2022, and
6. Additional rooms that require testing (if applicable.)

A floor plan map of the building with the test locations is included as Attachment A of this report.

As a quality control measure, KCI also included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted test kits to Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner prior to being returned to the laboratory for analysis.

KCI returned to the site on March 25, 2022 to retrieve the radon sampling test kits. KCI shipped all radon tests via overnight delivery to Airchek, Inc. for analysis by gamma-ray spectroscopy. Airchek, Inc. is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

Evaluation of Testing Conditions:

These tests represent:

- Follow-up to initial testing.

These tests were conducted to:

- Evaluate radon concentrations at the facility.

According to AARST, *Protocol for Conducting Measurements of Radon and Radon Decay Products in Schools and Large Buildings*, ideal testing conditions would be when the building is fully occupied and the heating system is active. For this test, the facility's HVAC system was operating in heating mode; therefore, KCI concludes that this test was conducted during ideal testing conditions.

KCI recorded observations of the following conditions in each room during the time of deployment and collection of the radon test kits:

- Indoor temperature,
- HVAC Operation,
- Dehumidifier operation,
- Humidifier operation,
- Ceiling fan operation, and
- Open windows or doors.

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the low 40°Fs and high temperatures ranged from the low 50°Fs to the low 70°Fs. Maximum sustained winds ranged from 0-29 miles per hour. Average humidity was around 56% with 0.51 inches of precipitation (rain) was recorded during testing period.

Results:

The sampling locations and analytical results are listed on Table 1 (Attachment B). The quality control sample locations and analytical results are listed on Table 2 (Attachment B). Sampling locations and associated test kit identification numbers and relevant field observations are listed on Table 3 (Attachment B). The laboratory analytical results are included in Attachment C. Laboratory results and exposure data for the spike samples are also included in Attachment C.

The results of the radon test analysis indicated the following:

Radon Concentration	Room	Result
≥4.0 pCi/L	None	N/A
<4.0 pCi/L	See Attachment B	

Quality Control Samples	
Results of Blank Canisters:	The office blanks, and lab transit blanks had test results of less than the laboratory detection limit of 0.3 pCi/L.
Adequate Laboratory Precision?	Review of the duplicate sample analysis indicates that adequate laboratory measurement precision was achieved.
Spike Sample Analysis:	The Spike Sample analysis results indicate the laboratory is operating within statistical control limits.

Our professional services have been performed in accordance with customary principles and practices in the field of industrial hygiene and engineering. If you have any questions or comments regarding this report, please feel free to contact me at (410) 891-1769.

Sincerely,



Tyler P. McCleaf
Radon Measurement Provider
#111004 RT
KCI Technologies, Inc.

Attachments: A- Floor Plan with Test Locations
 B- Table 1-3, Radon Test Summary Spreadsheets
 C- Laboratory Analytical Results

ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
Seneca Valley HS RT		
Test Period: 03/22/2022 - 03/25/2022		
Kit Number	Room / Area	Result
11139238	607	1.9
11139243	745	0.7
11139293	901	1.1
11139901	1103	< 0.3
11139908	1103	< 0.3
11139911	1103	0.6
11139914	1405	< 0.3
11139904	1406	< 0.3
11139296	1410	0.8
11139300	1411	2.4
11139297	1511	0.5
11139292	1523	< 0.3
11139909	1530	0.6
11139913	1709	< 0.3
11139907	2522	< 0.3
11139294	1101A	< 0.3
11139912	1526A	< 0.3

Table 2- Radon Testing Results			
Seneca Valley HS RT			
Test Period: 03/22/2022 - 03/25/2022			
Kit Number	QC Type	Room / Area	Result
11139901	D	1103	< 0.3
11139908	FB	1103	< 0.3
11139902	OB	OFFICE BLANK	< 0.3
11139928	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Seneca Valley HS RT		
Test Period: 03/22/22 - 03/25/22		
Kit Number	Room/Area	Result
	NA	

Summary of Missing, Compromised and ≥ 4 piC/L Tests		
Seneca Valley HS RT		
Test Period: 03/22/22 - 03/25/22		
Kit Number	Room/Area	Result
	NA	

Table Note:
 * Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

March 28, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139238	0607	2022-03-22 @ 12:00 pm	2022-03-25 @ 12:00 pm	1.9 ± 0.3	2022-03-28
11139243	0745	2022-03-22 @ 12:00 pm	2022-03-25 @ 12:00 pm	0.7 ± 0.3	2022-03-28
11139293	0901	2022-03-22 @ 12:00 pm	2022-03-25 @ 12:00 pm	1.1 ± 0.3	2022-03-28
11139294	1101A	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	< 0.3	2022-03-28
11139901	1103	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	< 0.3	2022-03-28
11139911	1103	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	0.6 ± 0.3	2022-03-28
11139908	1103	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	< 0.3	2022-03-28
11139914	1405	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	< 0.3	2022-03-28
11139904	1406	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	< 0.3	2022-03-28
11139296	1410	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	0.8 ± 0.3	2022-03-28
11139300	1411	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	2.4 ± 0.3	2022-03-28
11139297	1511	2022-03-22 @ 12:00 pm	2022-03-25 @ 12:00 pm	0.5 ± 0.3	2022-03-28
11139292	1523	2022-03-22 @ 12:00 pm	2022-03-25 @ 12:00 pm	< 0.3	2022-03-28
11139912	1526A	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	< 0.3	2022-03-28
11139909	1530	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	0.6 ± 0.3	2022-03-28
11139913	1709	2022-03-22 @ 1:00 pm	2022-03-25 @ 12:00 pm	< 0.3	2022-03-28
11139907	2522	2022-03-22 @ 12:00 pm	2022-03-25 @ 12:00 pm	< 0.3	2022-03-28

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 204620

NOMINAL Conditions: Radon Conc 27.0 pCi/L Rel. Hum 50.1 % Temp. 70.0 F

Date Start: 3/18/22 Date Stop: 3/21/22 Date Start: _____ Date Stop: _____

Time Start: 0705 Time Stop: 0705 Time Start: _____ Time Stop: _____

Device No.'s: (5) Char Bags - Device No.'s: _____

11139367, 11139368, 11139371, _____

11139710, 11139717 _____

E3 light

Date Start: _____ Date Stop: _____ Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____ Time Start: _____ Time Stop: _____

Device No.'s: _____ Device No.'s: _____

Date Start: _____ Date Stop: _____ Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____ Time Start: _____ Time Stop: _____

Device No.'s: _____ Device No.'s: _____

Note: All times are in 24-hour (military) notation, Eastern Standard Time (EST)
Background = 7 μ R/h Elevation = 820 ft

March 30, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value (25.7 pCi/L).

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11139367	SK1	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	25.9 \pm 2.1	2022-03-30
11139368	SK2	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	23.9 \pm 2.0	2022-03-30
11139371	SK3	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	25.7 \pm 2.1	2022-03-30
11139710	SK4	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	26.4 \pm 2.1	2022-03-30
11139717	SK5	2022-03-18 @ 7:00 am	2022-03-21 @ 7:00 am	24.6 \pm 2.0	2022-03-30

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – March 2022 Schools – Retesting

Name of Schools:

1. Herbert Hoover MS
2. Parkland MS
3. Redland MS
4. Rock Creek Valley ES
5. Tilden MS
6. Rockville HS
7. Wootton HS
8. Capt. James E. Daly ES
9. Clarksburg HS
10. Clearspring ES
11. Hallie Wells MS
12. Northwest HS
13. Paint Branch HS
14. Rocky Hills MS
15. Seneca Valley HS
16. Sherwood HS
17. Wilson Wims ES

	Date	Initials
Radon Test Kits Deployed	03/22/2022	BMM
Radon Test Kits Collected	03/25/2022	BMM
Radon Test Kits Shipped to Lab*	03/25/2022	BMM
Radon Test Kits Received by Lab*	03/28/2022	BMM

*All samples sent to Air Check, Inc., 1936 Butler Bridge Rd, Mills River, NC 28759



MCPS RADON TESTING – EXECUTIVE SUMMARY

Site Name	Seneca Valley High School
Date of Test Report	4/6/2022
Round of Testing	Initial Follow-up Post Remediation 2 Year Testing 5 Year Testing HVAC Upgrade Window Replacement New Addition New Facility
# Rooms Tested	118
# Rooms \geq 4.0 pCi/L	0
Lowest Value	<0.3 pCi/L
Highest Value	1.8 pCi/L

Project Status:

Initial testing completed; Missing or compromised kits need re-sampling.



April 6, 2022

Brian T. Croyle, PG, CHMM
Environmental Specialist
Montgomery County Public Schools
Gaithersburg, MD 20879

Re: **Radon Testing Services**
KCI Job # 122108316

Location: Seneca Valley HS
19401 Crystal Rock Dr.
Germantown, MD 20874

Dear Mr. Croyle:

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KCI visited the site on February 15, 2022 and deployed one hundred thirty eight (138) activated charcoal (AC) radon test kits. KCI deployed radon test kits in all frequently-occupied ground contact rooms, and other areas, (if applicable) in accordance with AARST guidance.

A floor plan map of the building with the test locations is included as Attachment A of this report.

As a quality control measure, KCI also included duplicate samples, field blanks, lab transit blanks, and office blanks in accordance with AARST recommendations. In addition, KCI submitted test kits to Bowser-Morner, Inc. as spike samples. The spiked tests were exposed to a known radon concentration by Bowser-Morner prior to being returned to the laboratory for analysis.

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is a NRSB certified analytical laboratory for radon analysis (certification # ARL1402) located at 1936 Butler Bridge Road, Mills River, North Carolina.

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These tests represent:

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- Evaluate radon concentration levels at the facility.

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- Indoor temperature,
- HVAC Operation,
- Dehumidifier operation,
- Humidifier operation,
- Ceiling fan operation, and
- Open windows or doors.

KCI also compiled weather data for the testing period and conducted observations of relevant field conditions. During the test period, weather records indicate low temperatures were in the 20s and high temperatures ranged from the high 30s to the high 40s Fahrenheit. Maximum sustained winds ranged from 5-18 miles per hour. Average humidity was around 15% with 1.5 inches of precipitation (rain) was recorded during testing period.

Results:

The sampling locations and analytical results are listed on Table 1 (Attachment B). The quality control sample locations and analytical results are listed on Table 2 (Attachment B). Sampling locations and associated test kit identification numbers and relevant field observations are listed on Table 3 (Attachment B). The laboratory analytical results are included in Attachment C. Laboratory results and exposure data for the spike samples are also included in Attachment C.

The results of the radon test analysis indicated the following:

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Sincerely,



Tyler P. McCleaf
Radon Measurement Provider
#111004 RT
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ATTACHMENT A

Floor Plan With Test Locations

ATTACHMENT B

Radon Test Summary Spreadsheet

Table Notes:

AC- Activated Charcoal

ACI- Air Check, Inc.

D- Duplicate

FB- Field Blank

KCI- KCI Technologies, Inc.

OB- Office Blank

PM- Project Manager

OC- Quality Control

Table 1- Radon Testing Results		
Seneca Valley HS		
Test Period: 02/15/2022 - 02/18/2022		
Kit Number	Room / Area	Result
11122815	604	< 0.3
11122816	604	< 0.3
11122817	604	< 0.3
11122810	606	0.8
11122824	615	0.8
11122825	718	< 0.3
11122807	725	0.6
11122823	727	< 0.3
11122832	729	< 0.3
11122831	743	0.7
11122804	751	< 0.3
11122818	751	< 0.3
11122833	751	< 0.3
11122813	753	< 0.3
11122839	755	1.1
11122803	800	< 0.3
11122812	801	< 0.3
11122834	801	1.1
11122820	901	NA
11122828	906	0.8
11122821	913	< 0.3
11124147	1104	< 0.3
11124148	1104	< 0.3
11124155	1104	0.6
11122802	1107	0.8
11123917	1112	0.8
11123923	1116	0.5
11123918	1203	0.8
11123913	1204	< 0.3
11123914	1207	< 0.3
11123922	1207	< 0.3
11123924	1207	0.9
11123920	1208	1.2
11123925	1210	0.9
11123926	1214	< 0.3
11123931	1306	< 0.3
11123929	1307	< 0.3
11123912	1310	< 0.3
11123932	1311	< 0.3
11123919	1321	< 0.3
11123933	1322	< 0.3
11123927	1325	< 0.3

Table 1- Radon Testing Results		
Seneca Valley HS		
Test Period: 02/15/2022 - 02/18/2022		
Kit Number	Room / Area	Result
11123934	1326	< 0.3
11123994	1405	0.6
11123999	1405	< 0.3
11124000	1409	0.8
11122801	1410	0.7
11123943	1502	< 0.3
11123938	1504	0.6
11123955	1505	0.8
11123956	1505	0.9
11123958	1505	< 0.3
11123950	1507	1.0
11123948	1508	0.5
11123936	1512	< 0.3
11123942	1515	0.9
11123928	1516	< 0.3
11123935	1522	< 0.3
11123944	1523	0.8
11123945	1523	NA
11123937	1526	< 0.3
11123939	1527	< 0.3
11123946	1535	< 0.3
11123960	1535	< 0.3
11123963	1535	0.7
11123952	1536	0.7
11123975	1601	< 0.3
11123983	1605	< 0.3
11123962	1606	0.6
11123970	1607	< 0.3
11123968	1610	0.5
11123977	1611	< 0.3
11123979	1613	0.6
11123990	1701	< 0.3
11123992	1701	0.6
11123976	1704	0.7
11123993	1707	< 0.3
11123997	1709	NA
11123978	1719	< 0.3
11122836	2105	< 0.3
11122830	2516	< 0.3
11122835	2516	0.7
11122847	2516	< 0.3
11122843	2522	NA

Table 1- Radon Testing Results		
Seneca Valley HS		
Test Period: 02/15/2022 - 02/18/2022		
Kit Number	Room / Area	Result
11122811	3120	< 0.3
11122842	4623	< 0.3
11122808	0604A	< 0.3
11122809	0604A	< 0.3
11123949	0801L	< 0.3
11123911	1104A	0.6
11124156	1104B	< 0.3
11123901	1104D	< 0.3
11123902	1104E	< 0.3
11123903	1104F	< 0.3
11123904	1104H	< 0.3
11123909	1104L	< 0.3
11123910	1104L	0.6
11123916	1104N	< 0.3
11123915	1104P	< 0.3
11123907	1104Q	< 0.3
11123905	1104R	0.6
11123908	1104S	< 0.3
11123906	1104V	1.8
11122806	1107A	< 0.3
11123930	1207A	0.6
11123921	1210C	< 0.3
11123941	1322A	< 0.3
11123995	1405A	0.5
11123996	1405D	< 0.3
11123985	1405F	0.6
11123947	1516B	0.6
11123957	1523A	< 0.3
11123951	1523B	< 0.3
11123959	1523D	0.6
11123940	1528A	< 0.3
11123965	1535F	0.6
11123953	1535G	< 0.3
11123964	1536A	0.6
11123972	1537B	1.0
11123973	1537C	0.9
11123974	1537D	0.8
11123988	1537F	0.8
11123954	1537H	0.6
11123967	1537J	0.5
11123980	1537L	0.9
11123981	1537L	1.3

Table 1- Radon Testing Results		
Seneca Valley HS		
Test Period: 02/15/2022 - 02/18/2022		
Kit Number	Room / Area	Result
11123969	1537N	< 0.3
11123971	1537P	0.7
11123961	1537S	< 0.3
11123966	1537T	0.6
11123989	1537V	0.9
11123982	1537Y	0.9
11123991	1701A	0.8
11123987	1701B	< 0.3
11123984	1701D	< 0.3
11122826	753C	0.9
11122840	753C	< 0.3
11122819	755A	0.9

Table 2- Radon Testing Results			
Seneca Valley HS			
Test Period: 02/15/2022 - 02/18/2022			
Kit Number	QC Type	Room / Area	Result
11124148	D	1104	< 0.3
11124155	FB	1104	0.6
11123910	D	1104L	0.6
11123924	D	1207	0.9
11123922	FB	1207	< 0.3
11123955	D	1505	0.8
11123958	FB	1505	< 0.3
11123945	D	1523	NA
11123946	D	1535	< 0.3
11123960	FB	1535	< 0.3
11123981	D	1537L	1.3
11123992	D	1701	0.6
11123994	D	1405	0.6
11123999	FB	1405	< 0.3
11122809	D	0604A	< 0.3
11122816	D	604	< 0.3
11122817	FB	604	< 0.3
58112281	D	751	< 0.3
11122833	FB	751	< 0.3
11122812	D	801	< 0.3
11122847	D	2516	< 0.3
11122830	FB	2516	< 0.3
11131660	OB	OFFICE BLANK	< 0.3
11131661	TB	TRAVEL BLANK	< 0.3

Summary of Missed Locations		
Seneca Valley HS		
Test Period: 02/15/22 - 02/18/22		
Kit Number	Room/Area	Result
NA	1101A	NA
NA	1530	NA
NA	745	NA
NA	1103	NA
NA	1410	NA
NA	1411	NA
NA	1406	NA
NA	1511	NA
NA	607	NA

Summary of Missing, Compromised and ≥ 4 pC/L Tests		
Seneca Valley HS		
Test Period: 02/15/22 - 02/18/22		
Kit Number	Room/Area	Result
NA	1526A	Missing
11123986	1405	Missing
11122843	2522	Compromised
11122820	901	Compromised
11123945	1523	Compromised
11123997	1709	Compromised

Table Note:
* Missing or Compromised Sample

ATTACHMENT C

Laboratory Analytical Results

February 23, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122836	2105	2022-02-15 @ 8:00 pm	2022-02-18 @ 3:00 pm	< 0.3	2022-02-22
11122830	2516	2022-02-15 @ 8:00 pm	2022-02-18 @ 3:00 pm	< 0.3	2022-02-22
11122835	2516	2022-02-15 @ 8:00 pm	2022-02-18 @ 3:00 pm	0.7 ± 0.3	2022-02-22
11122847	2516	2022-02-15 @ 8:00 pm	2022-02-18 @ 3:00 pm	< 0.3	2022-02-22
11122843	2522	2022-02-15 @ 8:00 pm	2022-02-18 @ 3:00 pm	???? IF1	2022-02-22
11122811	3120	2022-02-15 @ 8:00 pm	2022-02-18 @ 3:00 pm	< 0.3	2022-02-22
11122842	4623	2022-02-15 @ 9:00 pm	2022-02-18 @ 3:00 pm	< 0.3	2022-02-22
11122819	755A	2022-02-15 @ 8:00 pm	2022-02-18 @ 2:00 pm	0.9 ± 0.3	2022-02-22
11122820	901	2022-02-15 @ 8:00 pm	2022-02-18 @ 2:00 pm	???? IF1	2022-02-22
11122828	906	2022-02-15 @ 8:00 pm	2022-02-18 @ 2:00 pm	0.8 ± 0.3	2022-02-22
11122821	913	2022-02-15 @ 8:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

Radon test result report for:
SENACA VALLEY HS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122817	0604	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122816	0604	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122815	0604	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122808	0604A	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122809	0604A	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122803	0800	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11123949	0801L	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11124148	1104	2022-02-15 @ 12:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11124147	1104	2022-02-15 @ 12:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11124155	1104	2022-02-15 @ 12:00 pm	2022-02-18 @ 11:00 am	0.6 ± 0.3	2022-02-22
11123911	1104A	2022-02-15 @ 2:00 pm	2022-02-18 @ 10:00 am	0.6 ± 0.3	2022-02-22
11124156	1104B	2022-02-15 @ 12:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123901	1104D	2022-02-15 @ 12:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123902	1104E	2022-02-15 @ 12:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123903	1104F	2022-02-15 @ 12:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123904	1104H	2022-02-15 @ 1:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123910	1104L	2022-02-15 @ 1:00 pm	2022-02-18 @ 11:00 am	0.6 ± 0.3	2022-02-22
11123909	1104L	2022-02-15 @ 1:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123916	1104N	2022-02-15 @ 1:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123915	1104P	2022-02-15 @ 1:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123907	1104Q	2022-02-15 @ 1:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123905	1104R	2022-02-15 @ 1:00 pm	2022-02-18 @ 11:00 am	0.6 ± 0.3	2022-02-22
11123908	1104S	2022-02-15 @ 1:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123906	1104V	2022-02-15 @ 1:00 pm	2022-02-18 @ 11:00 am	1.8 ± 0.4	2022-02-22
11122802	1107	2022-02-15 @ 6:00 pm	2022-02-18 @ 11:00 am	0.8 ± 0.4	2022-02-22
11122806	1107A	2022-02-15 @ 6:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123917	1112	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	0.8 ± 0.3	2022-02-22
11123923	1116	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	0.5 ± 0.3	2022-02-22
11123918	1203	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	0.8 ± 0.3	2022-02-22
11123913	1204	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123924	1207	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	0.9 ± 0.3	2022-02-22
11123922	1207	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123914	1207	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123930	1207A	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	0.6 ± 0.3	2022-02-22
11123920	1208	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	1.2 ± 0.3	2022-02-22
11123925	1210	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	0.9 ± 0.3	2022-02-22
11123921	1210C	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22

Radon test result report for:
SENACA VALLEY HS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11123926	1214	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123931	1306	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123929	1307	2022-02-15 @ 2:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123912	1310	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123932	1311	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123919	1321	2022-02-15 @ 3:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123933	1322	2022-02-15 @ 3:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123941	1322A	2022-02-15 @ 3:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123927	1325	2022-02-15 @ 3:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123934	1326	2022-02-15 @ 3:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123999	1405	2022-02-15 @ 6:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123994	1405	2022-02-15 @ 6:00 pm	2022-02-18 @ 1:00 pm	0.6 ± 0.3	2022-02-22
11123995	1405A	2022-02-15 @ 6:00 pm	2022-02-18 @ 1:00 pm	0.5 ± 0.3	2022-02-22
11123996	1405D	2022-02-15 @ 6:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123985	1405F	2022-02-15 @ 6:00 pm	2022-02-18 @ 1:00 pm	0.6 ± 0.3	2022-02-22
11124000	1409	2022-02-15 @ 6:00 pm	2022-02-18 @ 1:00 pm	0.8 ± 0.3	2022-02-22
11123943	1502	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123938	1504	2022-02-15 @ 4:00 pm	2022-02-18 @ 2:00 pm	0.6 ± 0.3	2022-02-22
11123958	1505	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123956	1505	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	0.9 ± 0.3	2022-02-22
11123950	1507	2022-02-15 @ 3:00 pm	2022-02-18 @ 2:00 pm	1.0 ± 0.3	2022-02-22
11123948	1508	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	0.5 ± 0.3	2022-02-22
11123936	1512	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123942	1515	2022-02-15 @ 3:00 pm	2022-02-18 @ 12:00 pm	0.9 ± 0.3	2022-02-22
11123928	1516	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	< 0.3	2022-02-22
11123947	1516B	2022-02-15 @ 3:00 pm	2022-02-18 @ 1:00 pm	0.6 ± 0.3	2022-02-22
11123935	1522	2022-02-15 @ 4:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11123945	1523	2022-02-15 @ 4:00 pm	2022-02-18 @ 11:00 am	???? IF1	2022-02-22
11123944	1523	2022-02-15 @ 4:00 pm	2022-02-18 @ 11:00 am	0.8 ± 0.4	2022-02-22
11123957	1523A	2022-02-15 @ 4:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123951	1523B	2022-02-15 @ 4:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123959	1523D	2022-02-15 @ 4:00 pm	2022-02-18 @ 11:00 am	0.6 ± 0.3	2022-02-22
11123937	1526	2022-02-15 @ 4:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123939	1527	2022-02-15 @ 4:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11123940	1528A	2022-02-15 @ 4:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11123963	1535	2022-02-15 @ 4:00 pm	2022-02-18 @ 12:00 pm	0.7 ± 0.3	2022-02-22
11123960	1535	2022-02-15 @ 5:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22

Radon test result report for:
SENACA VALLEY HS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11123946	1535	2022-02-15 @ 4:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123965	1535F	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	0.6 ± 0.3	2022-02-22
11123953	1535G	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123952	1536	2022-02-15 @ 4:00 pm	2022-02-18 @ 12:00 pm	0.7 ± 0.3	2022-02-22
11123964	1536A	2022-02-15 @ 4:00 pm	2022-02-18 @ 12:00 pm	0.6 ± 0.3	2022-02-22
11123972	1537B	2022-02-15 @ 5:00 pm	2022-02-18 @ 11:00 am	1.0 ± 0.3	2022-02-22
11123973	1537C	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	0.9 ± 0.3	2022-02-22
11123974	1537D	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	0.8 ± 0.3	2022-02-22
11123988	1537F	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	0.8 ± 0.3	2022-02-22
11123954	1537H	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	0.6 ± 0.3	2022-02-22
11123967	1537J	2022-02-15 @ 5:00 pm	2022-02-18 @ 11:00 am	0.5 ± 0.3	2022-02-22
11123981	1537L	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	1.3 ± 0.4	2022-02-22
11123980	1537L	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	0.9 ± 0.3	2022-02-22
11123969	1537N	2022-02-15 @ 5:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123971	1537P	2022-02-15 @ 5:00 pm	2022-02-18 @ 11:00 am	0.7 ± 0.3	2022-02-22
11123961	1537S	2022-02-15 @ 5:00 pm	2022-02-18 @ 11:00 am	< 0.3	2022-02-22
11123966	1537T	2022-02-15 @ 5:00 pm	2022-02-18 @ 11:00 am	0.6 ± 0.3	2022-02-22
11123989	1537V	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	0.9 ± 0.3	2022-02-22
11123982	1537Y	2022-02-15 @ 5:00 pm	2022-02-18 @ 11:00 am	0.9 ± 0.4	2022-02-22
11123975	1601	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123983	1605	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123962	1606	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	0.6 ± 0.3	2022-02-22
11123970	1607	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123968	1610	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	0.5 ± 0.3	2022-02-22
11123977	1611	2022-02-15 @ 5:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123979	1613	2022-02-15 @ 6:00 pm	2022-02-18 @ 12:00 pm	0.6 ± 0.3	2022-02-22
11123992	1701	2022-02-15 @ 6:00 pm	2022-02-18 @ 12:00 pm	0.6 ± 0.3	2022-02-22
11123990	1701	2022-02-15 @ 6:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123991	1701A	2022-02-15 @ 6:00 pm	2022-02-18 @ 12:00 pm	0.8 ± 0.3	2022-02-22
11123987	1701B	2022-02-15 @ 6:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123984	1701D	2022-02-15 @ 6:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123976	1704	2022-02-15 @ 6:00 pm	2022-02-18 @ 12:00 pm	0.7 ± 0.3	2022-02-22
11123993	1707	2022-02-15 @ 6:00 pm	2022-02-18 @ 12:00 pm	< 0.3	2022-02-22
11123997	1709	2022-02-15 @ 6:00 pm	2022-02-18 @ 12:00 pm	???? IF1	2022-02-22
11122833	751	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122818	751	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122813	753	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22

February 23, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
SENACA VALLEY HS

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122840	753C	2022-02-15 @ 8:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122826	753C	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	0.9 ± 0.3	2022-02-22
11122839	755	2022-02-15 @ 8:00 pm	2022-02-18 @ 2:00 pm	1.1 ± 0.3	2022-02-22
11122834	801	2022-02-15 @ 8:00 pm	2022-02-18 @ 2:00 pm	1.1 ± 0.3	2022-02-22
11122812	801	2022-02-15 @ 8:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

February 23, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

SENACA VALLEY HSFT HI L

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122810	0606	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	0.8 ± 0.3	2022-02-22

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

February 23, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:

**SENACA VALLEY HSFT HI L
DY**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122824	0615	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	0.8 ± 0.4	2022-02-22
11122825	0718	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122807	0725	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	0.6 ± 0.3	2022-02-22
11122823	0727	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122832	0729	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22
11122831	743	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	0.7 ± 0.3	2022-02-22
11122804	751	2022-02-15 @ 7:00 pm	2022-02-18 @ 2:00 pm	< 0.3	2022-02-22

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

February 23, 2022

**** LABORATORY ANALYSIS REPORT ****

Radon test result report for:
**SENECA VALLEY HS
MAIN**

Kit #	Room Id	Started	Ended	pCi/L	Analyzed
11122801	1410	2022-02-15 @ 10:00 am	2022-02-18 @ 11:00 am	0.7 ± 0.3	2022-02-22
11123955	1505	2022-02-15 @ 10:00 am	2022-02-18 @ 11:00 am	0.8 ± 0.3	2022-02-22
11123978	1719	2022-02-15 @ 10:00 am	2022-02-18 @ 11:00 am	< 0.3	2022-02-22

Air Chek 1936 Butler Bridge Rd, Mills River, NC 28759-3892 Phone: (828) 684-0893 Fax: (828) 684-8498

EXPOSURE IN BOWSER-MORNER RADON CHAMBER

CLIENT KCI Technologies, Inc. Job Number 204186

NOMINAL Conditions: Radon Conc 25.8 pCi/L Rel. Hum 50.1 % Temp. 70.9 F

Date Start: 2/18/22 Date Stop: 2/21/22 Date Start: _____ Date Stop: _____

Time Start: 0911 Time Stop: 0911 Time Start: _____ Time Stop: _____

Device No.'s: (3) Char Bags -
11113484, 1112998, 20107126 Device No.'s: _____

23 Right

Date Start: _____ Date Stop: _____ Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____ Time Start: _____ Time Stop: _____

Device No.'s: _____ Device No.'s: _____

Date Start: _____ Date Stop: _____ Date Start: _____ Date Stop: _____

Time Start: _____ Time Stop: _____ Time Start: _____ Time Stop: _____

Device No.'s: _____ Device No.'s: _____

**Note: All times are in 24-hour (military) notation, Eastern Standard Time (EST)
Background = 7 µR/h Elevation = 820 ft**

MCPS - Spike Sample Lab Results. Measured values are satisfactory, i.e., within $\pm 25\%$ of the chamber's reference value (25.7 pCi/L).

Kit Number	Start Date	Start Time	End Date	End Time	Temp.	Facility	Building	Room	Project ID	Floor	Result
11113484	2022-02-18	9:00 am	2022-02-21	9:00 am	71	OFFICE	MAIN	SK1		1	27.9
11122998	2022-02-18	9:00 am	2022-02-21	9:00 am	71	OFFICE	MAIN	SK2		1	26.0
20107126	2022-02-18	9:00 am	2022-02-21	9:00 am	71	OFFICE	MAIN	SK3		1	27.6



Radon Test Kit Chain of Custody

Project Name: MCPS Radon – February 2022 Schools

Name of Schools:

1. Damascus HS
2. Germantown ES
3. Great Seneca Creek ES
4. Lake Seneca ES
5. S. Christa McAuliffe ES
6. Northwest HS
7. Waters Landing ES
8. Seneca Valley HS
9. Cedar Grove ES
10. Capt. James E. Daly ES
11. Neelsville MS
12. Dr. Sally K. Ride ES

	Date	Initials
Radon Test Kits Deployed	02/15/2022	DM
Radon Test Kits Collected	02/18/2022	DM
Radon Test Kits Shipped to Lab*	02/18/2022	DM
Radon Test Kits Received by Lab*	02/21/2022	DM

*All samples sent to Air Check, Inc., 1936 Butler Bridge Rd, Mills River, NC 28759